REMARKS

Claims 1, 3-8, 11-22, 24-26 and 43-47 stand rejected under 35 U.S.C. §103(a) for obviousness over U.S. Patent Publication No. 2002/0007289 to Malin in view of U.S. Patent No. 6,516,239 to Madden et al. Applicants respectfully traverse this rejection for the following reasons.

A. Malin does not teach periodically updating repair status information.

The present invention as defined by claim 1 is directed to a method of determining the status of a vehicle undergoing repair wherein repair status information maintained in a database at a repair location is periodically updated and that updated information is transferred to a remote location. The remote location is accessible for identifying and determining the status of repair of a vehicle. The vehicle being repaired is tracked via its vehicle identification number (VIN) or a bar code.

The Office Action asserts that Malin discloses "periodically updating" repair status information to a computer database within a repair shop at ¶¶ 0034, 0057-0058 and 0070-0072 and in steps 925-930 of Fig. 9. This assertion is incorrect; there is no teaching or suggestion to periodically update the repair stop database. To the extent that the repair shop database 725 receives information from shop terminal 720, nowhere does Malin describe periodically updating the status of a repair of a vehicle to the shop database 725. Paragraph 0034 does not describe or suggest any periodic updating of repair status information. That disclosure describes software and hardware for scheduling repair orders within a repair shop. It does not describe any software for updating the status of repair of individual vehicles.

Paragraphs 0057-0058 describe recording the start and stop times of particular tasks during a repair process. As noted in ¶ 0058, all the data from the repair order, including the start and stop times, can be stored in a network database 250. This does not constitute periodic updating of the repair status of a vehicle being repaired. It only includes historical information as to the starting and stopping of tasks in the repair process. Paragraphs 0070-0072 are also cited as assertedly disclosing periodically updated repair status information on a shop database. That portion of Malin describes the relationship between a shop database 725 that stores information similar to the database 250. As noted, database 250 does not include periodic data on the repair status for vehicles. At most, it indicates the start/stop times for repair processes. In the absence of the shop database 725 incorporating periodically updated repair status information, there can be no transfer of that

information to a remote location which is then searchable to identify data of the status for a vehicle undergoing repair.

B. Madden tracks vehicle production, not repair history, based on VIN.

In addition, the Office Action acknowledges that the Malin application does not describe tracking a vehicle being repaired based on the VIN or a bar code. The Malin application is only concerned with tracking individual repair orders and not a particular vehicle. The Madden patent is cited for disclosing an assembly line control system that identifies vehicles being manufactured in the assembly line based on their VIN. The Office Action asserts that Madden discloses reasons for using the VIN as an identifier "to track the repair history of the vehicle". Madden does not relate to vehicles being repaired at a remote location. Madden does disclose the need for repair of vehicles that are produced in an assembly line to repair production defects. Vehicles that are found to be defective during their production are removed from the assembly line, repaired and subsequently returned to the assembly line. The VIN is used as an identifier for the vehicle throughout the entire manufacturing system. It is not used "to track the repair history of the vehicle" as asserted in the Office Action. As such, one skilled in the art has no motivation to modify the Malin method to track vehicles based on VIN. As noted in Madden, at col. 7, the VIN identifies the vehicle to be manufactured and describes the processes to be conducted on the vehicle, the locations that those processes are to occur in the assembly, and an assembly sheet that identifies the parts to be installed on the vehicle, etc. To the extent that the Madden patent tracks a vehicle which is defective and is sent to a separate portion of the manufacturing system for defect repair, this does not rise to the level of maintaining a computer database of all vehicles via their VIN to identify repair status information based on the vehicle VIN. Accordingly, the combined teachings of Malin and Madden do not suggest the inventions of claims 1 and 3-8.

C. Neither reference teaches or suggests sorting vehicles based on unchanged status data.

With respect to claim 16, the present invention includes a method of tracking the repair process of a vehicle in a repair shop, including periodically electronically updating the status of the vehicles undergoing repair to a database on the computer and identifying any vehicle for which the status of the repair is unchanged beyond a predetermined length of time. The vehicles are sorted for those having status data that is unchanged beyond a predetermined length of time. The Office Action asserts that ¶¶ 0052, 0064 and 0074 of

Malin describe "sorting the vehicles for which the status data is unchanged for a predetermined length of time". Actually, ¶ 0052 only describes a scheduling hub having an algorithm that may include information concerning cycle time (length of time for a task) and dead time (no work done) for particular tasks. Collecting information on cycle time and dead time is not similar to collecting data on unchanged repair status for a period of time. Moreover, nothing in Malin considers monitoring the length of time that repair status is unchanged and sorting vehicles in a database for a status data that is unchanged beyond a predetermined length of time. Likewise, ¶ 0064 describes the opportunity to provide an electronic alert when a deadline of a scheduled repair task has been missed. Again, this does not involve sorting vehicles in a database for status data that is unchanged beyond a predetermined length of time. Paragraph 0074 describes collecting shop-specific statistics that may include cycle time and dead time. Again, the data for vehicles within a database having status data that is unchanged beyond a predetermined length of time is not suggested.

The Madden patent describes rearranging the order of vehicles to the extent necessary to repair defects that occur during manufacturing of a vehicle. This is not a step of sorting vehicles for status data that is unchanged. Any "sorting" that occurs according to the Madden process, is to physically insert a vehicle that has had a manufacturing defect repaired into the appropriate place in the on-going assembly line. As such, claim 16 and dependent claims 17-20 define over the prior art.

Furthermore, the assertion that the Malin and Madden patents teach the method of claim 17 wherein the status data is transferred daily based on Figs. 1 and 9 of Malin is not understood. Nowhere does either reference teach or suggest daily updates of status data.

Claim 20 further defines over the cited references in requiring that the database stores the vehicle identifier, including the make, model and year of the vehicle, such that the software in the method determines the extent of the status data for each of these identifiers remains unchanged beyond a predetermined length of time. To the extent that the Malin publication considers identifying a vehicle based on its make, model or year, neither of the cited references teaches or suggests sorting vehicles for which the status data is unchanged beyond a predetermined length of time according to one of a make, model or vehicle year. As such, claim 20 further defines thereover.

D. The systems of claims 21 and 43 are not suggested by the prior art.

Claim 21 is directed to a system for determining the status of a vehicle undergoing repair and includes components that parallel process steps of claim 1. In particular, claim 21 requires a means for periodically updating the repair status information on a computer database that tabulates status data on vehicles undergoing repair according to a vehicle identification number or bar code for each vehicle. In the absence of a process of periodically updating that repair status information, which also includes the VIN or bar code for the vehicle, there can be no means for periodically updating the same in the cited references. Accordingly, claims 21, 22 and 24-26 define thereover.

Claim 43 is directed to a system for tracking the repair process of a vehicle that is undergoing repair in the repair shop and parallels the method of claim 16. As such, it includes a means for sorting the vehicles for which the status data is unchanged beyond a predetermined length of time. In the absence of any such step according to the combined teachings of the cited references, there can be no means for performing such a function and claims 43-47 define over the cited references.

In view of the foregoing, it should be appreciated that claims 1, 3-8, 11-22, 24-26 and 43-47 define over the prior art of record and are in condition for allowance.

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